

ELEOCHARIS IGNOTA (CYPERACEAE), A NEW SPECIES FROM WESTERN MEXICO

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ABSTRACT. *Eleocharis ignota* S. González & Reznicek (Cyperaceae), previously described as *E. montevidensis* Kunth forma *angustior*, is elevated to the rank of species. Its differences with *E. montevidensis* and *E. dombeyana* are discussed.

RESUMEN. *Eleocharis ignota* S. González et Reznicek (Cyperaceae), previamente tratada como *E. montevidensis* Kunth forma *angustior*, es reconocida a nivel de especie. Se comentan sus diferencias con *E. montevidensis* y *E. dombeyana*.

During 1991 and 1992, while revising sedges for the upcoming volume of the *Flora Novo-Galiciana*, Rogers McVaugh found an unknown element of *Eleocharis* that was provisionally named “*E. ignota*.” He asked Socorro González-E. for her opinion regarding this novelty and invited her to describe it. After collecting more material in Jalisco and reviewing a number of specimens of the complex surrounding *E. montevidensis* Kunth, González-E. concluded, with considerable doubts, that “*E. ignota*” could represent only a regional form of the variable and widely distributed *E. montevidensis* and described it as *E. montevidensis* forma *angustior* S. González & McVaugh (McVaugh 1993). The epithet for the forma reflects the shape of the spikelets, which are longer and relatively narrower than those of other populations of *E. montevidensis*.

Recent studies on *Eleocharis* subseries *Truncatae* from Mexico reveal that the name *E. montevidensis* has been broadly applied to a complex of species, and that *E. montevidensis* forma *angustior* represents one of these. Therefore, this taxon is elevated to the rank of species.

Eleocharis ignota S. González & Reznicek, sp. nov. *Eleocharis montevidensis* forma *angustior* S. González & McVaugh, *Flora Novo-Galiciana* 13: 362. 1993.—**TYPE:** MEXICO. Jalisco: 22 km de Lagos de Moreno, por la carretera a Guadalajara, en charcos, 12 Aug 1992, S. González 5249 with A. García y L. López (holotype: CIIDIR!; isotypes: ANSM! CHAP! CHAPA! ENCB! IBUG! IEB! MEXU! MICH! NMSU!). Figs. 1, 2.

Caespitose perennial from a hard, ligneous rhizome covered by remains of older culm bases (usually the rhizome absent in herbarium specimens and the clumps appearing to arise from a vertical or ascending caudex). Culms erect, 20–44 cm long, 0.4–1 mm wide, rectangular to subterete and strongly flattened, with 3–4 blunt ridges on each of the wide sides, flattened or subterete at summit. Basal sheaths membranous, easily disintegrating, purple at the base, the apex oblique, rounded, the mouth



FIG. 1. *Eleocharis ignota*. Habit of flowering plant, showing the coarse rhizome (*S. González* 5249; holotype).

rounded or v-shaped; upper sheath 2.4–5 cm long, tight, cylindrical, pale green or purple, the apical margin reddish, thickened; truncate, with an erect subulate fragile cusp (0.5–) 0.8–2 mm long, 0.1–0.2 mm wide at the base. Spikelets lanceoloid to ellipsoid (ovoid when immature), 9–13 mm long, 1.8–3.5 mm thick, usually acute to narrowly acute, less often obtuse, ca. (35–) 70–160-flowered; floral scales 1.7–2.1 mm long, 0.8–1.2 mm wide, polystichous, appressed, narrowly ovate to narrowly elliptic, obtuse to acute, the midvein stramineous or reddish, laterally membranous, dark purple to almost black, the margins and apex scarious, colorless, gradually translucent, with one or two horizontal wrinkles near the apex; the two lowermost scales sterile, the lowermost amplexicaulous, 1.8–2 mm long, 1.6–2 mm wide, the median part green and up to 1.2 mm wide, appearing to be a continuation of the culm, the margins and apex scarious, colorless, translucent, wrinkled, the apex 0.8–1.1 mm long, rounded to

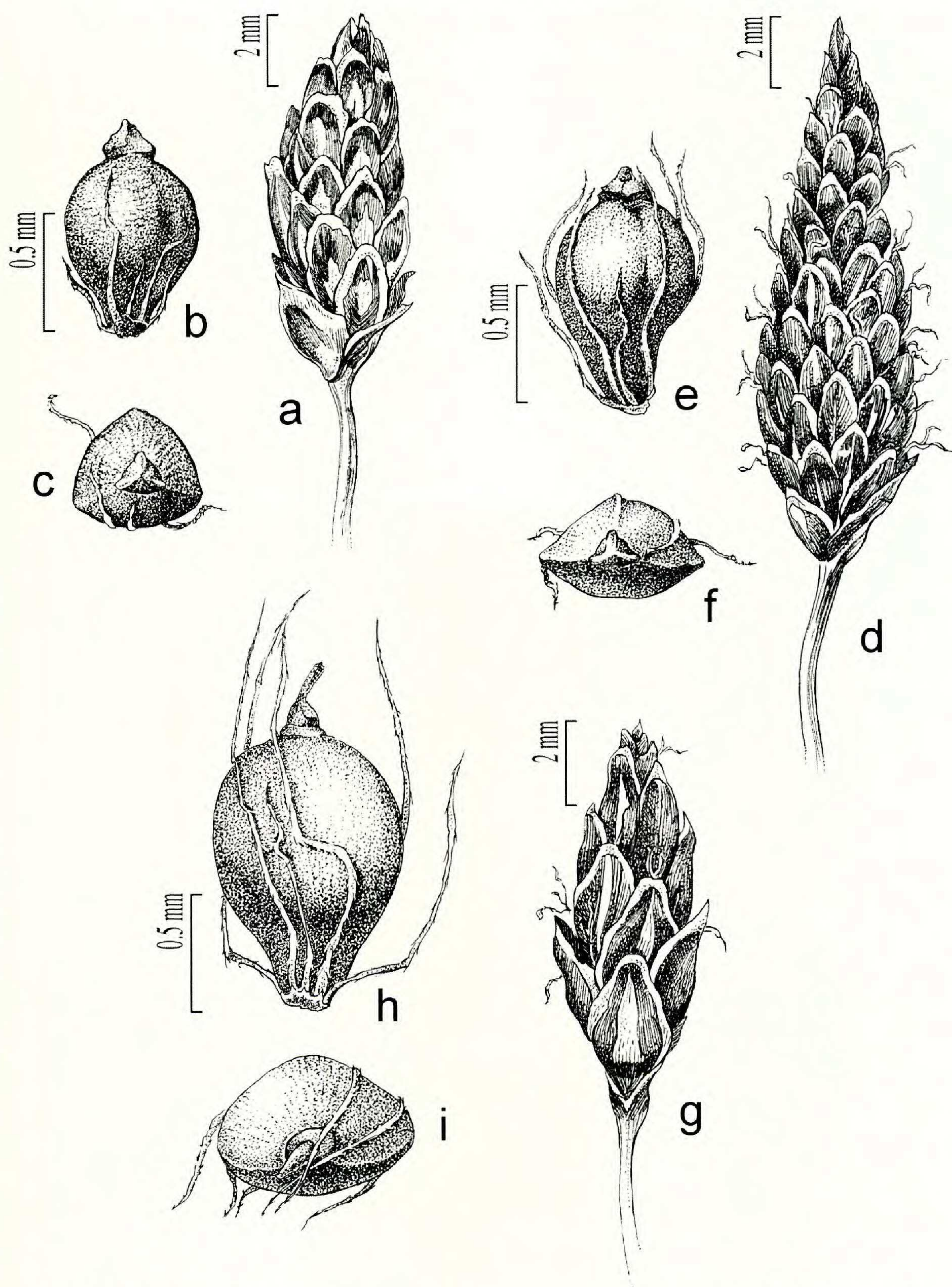


FIG. 2. Spikelets and achenes of *Eleocharis montevidensis*, *E. ignota*, and *E. dombeyana*. a–c, *E. montevidensis*: a. Spikelet. b. Achene, lateral view. c. Achene, seen from above. d–f, *E. ignota*: d. Spikelet. e. Achene, lateral view. f. Achene, seen from above. g–i, *E. dombeyana*: g. Spikelet. h. Achene, lateral view. i. Achene, seen from above. (Based on: a–c, McVaugh 16915, MICH; d–f, González 5249, MICH; g–i, King 3004, MICH.)

broadly acute. Achene 0.8–1.1 (–1.3) mm long including base and tubercle, the body 0.7–1 mm long, ca. 0.6–0.8 mm wide, broadly obovate in outline, obtusely triangular or plano-convex with the dorsal angle slightly costulate, pale yellow, finely reticulate and striate with many rows of linear, vertical cells, sometimes appearing nearly smooth, shiny; tubercle 0.15–0.23 mm long, 0.28–0.32 mm wide at the base, conic to deltoid, slightly spongy, whitish or greenish, sessile or with a short constriction at the summit of the achene. Perianth of 5–7 bristles appressed to achene, somewhat recurved

TABLE 1. Comparison of *Eleocharis montevidensis*, *E. dombeyana*, and *E. ignota*.

	<i>E. montevidensis</i>	<i>E. dombeyana</i>	<i>E. ignota</i>
Rhizomes	slender, creeping	slender, creeping	thick, ligneous, not creeping
Persistent bases of older culms covering the rhizomes and base of clumps	absent or uncommonly present	absent or uncommonly present	often present
Cusp at apex of the upper sheath	mucronulate to mucronate, firm, never setiform at the apex	mucronate, firm, never setiform at the apex	subulate, fragile, often setiform at the apex
Size of cusp on apex of the upper sheath	0.1–0.5 (–0.9) mm long, 0.2–0.3 mm wide at base	0.4–1.2 mm long, 0.2–0.3 mm wide at base	(0.5–) 0.8–2 mm long, 0.1–0.2 mm wide at base
Spikelets (shape)	ovoid to ellipsoid; usually obtuse;	ovoid to lanceoloid, acute	narrowly ellipsoid to lanceoloid; acute or obtuse;
Spikelets (length)	3–12 mm	4–14 mm	9–13 mm
Floral scales (apex)	broadly rounded	subacute to acute	rounded to subacute
Floral scales (color)	orange-brown to reddish or dark brown	dark purple to almost black	dark purple to almost black
Achene (body size)	0.7–1 mm long, 0.6–0.8 mm wide	0.8–1.2 mm long, (0.7–) 0.8 mm wide	0.7–1 mm long, 0.6–0.8 mm wide
Achene (color)	golden-yellow to dark brown when fully mature	yellow to brown when fully mature	pale yellow
Achene (surface; 40×)	punctate-pitted or conspicuously reticulate	very finely reticulate to almost smooth	finely reticulate-striolated to almost smooth
Tubercle of achene	deltoid, 0.1–0.3 mm long	mucroniform to lanceoloid, 0.2–0.5 mm long	deltoid, 0.15–0.23 mm long
Perianth bristles	stramineous to pale reddish or brown	reddish to reddish brown	translucent, colorless to slightly reddish tinged

and quite variable in length, shorter than or slightly longer than achene, colorless or slightly reddish tinged, translucent, retrorsely spinulose with translucent, colorless irregular prolongations, proximally slightly flattened, on a disc ca 0.1 mm long at the base of the achene. Style trifid. Stamens 3, filaments whitish to reddish, anthers pale yellow, thecae 1–1.5 mm long, the connective not prolonged.

Phenology. Flowering: May to August; fruiting: August (perhaps until November).

Distribution. Central Plateau of central-western Mexico (Durango, Jalisco, Guanajuato, and Michoacán); locally abundant in water-filled depressions in grasslands with shrubs (e.g., *Acacia schaffneri*) on very heavy clay soils, often halophytic; 1800–2200 m.

ADDITIONAL SPECIMENS EXAMINED. **Mexico.** DURANGO: Mpio. Súchil, Reserva de la Biosfera La Michilía, 3 km al S de El Alemán, cerca de la laguna Los Anegados, 23°18'35"N, 104°10'02"W, orilla de laguna, 2190 m, 6 Aug 1986, *F. Acevedo 172* (CIIDIR).—GUANAJUATO: 8 km al E de Yuriria, sobre la carretera

a Salvatierra, pastizal halófilo, 1800 m, 11 Aug 1986, *J. Rzedowski 40306* (CIIDIR, IEB) (distributed as *Eleocharis* aff. *montevidensis*).—JALISCO: near Km 57, just E of the Aguascalientes state line, road from Ojuelos, about 13 mi W of Paso de la Troje, permanently wet depressions in level grassland, 2000 m, 17 Aug 1958, *R. McVaugh 17041* (MICH); 40.4 km de la salida a San Juan de los Lagos por la carretera a Lagos de Moreno, suelos húmedos y encharcados a lo largo de la carretera, 1890 m, 28 Jul 1978, *R. Guzmán, Puga & Carvajal 1039* (IBUG); Campo Charro, carr. 80, entre Pegueros y Valle de Guadalupe, terreno semi-inundado, *A. Rodríguez 1287* (CIIDIR, IEB).—MICHOACÁN: NE de Maravatío, en terreno plano, dentro del agua, orilla de camino, potrero, 28 Jun 1986, *J. Santos Martínez 1435* (CIIDIR, IEB) (distributed as *Eleocharis* aff. *montevidensis*); Mpio. Morelia, 3 km adelante de San José Itzicuaro, rumbo a Quiroga, 2000 m, 9 Aug 1991, *M. Flores-Cruz 564*, *A. Espejo & A. R. López-Ferrari* (CIIDIR, UAMIZ).

Eleocharis ignota belongs to subgenus *Eleocharis* subseries *Truncatae*, a strictly American group (Svenson 1932) strongly in need of revision. *Eleocharis ignota* most closely resembles *E. montevidensis*; it can be separated from that species by a combination of characters: rhizomes ligneous, without long internodes, not long-creeping; apex of the upper sheaths truncate (versus truncate to slightly oblique), with a longer, subulate and fragile cusp; spikelets often acute and averaging longer; paler perianth bristles; and lighter, smoother achenes. The characters in which *E. ignota* differs from *E. montevidensis* and *E. dombeyana* Kunth, another widespread member of *Eleocharis* subseries *Truncatae* with which *E. ignota* can be confused, are given in Table 1 and illustrated in Fig 2. *Eleocharis dombeyana* was excluded from the *Flora Novo-Galiciana* (McVaugh 1993, p. 368), although Svenson had annotated a specimen as an anomalous form of this species; this collection (*McVaugh 17041*, MICH) represents *E. ignota*.

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